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Intramolecular and intermolecular contributions to the spin-lattice relaxation of protons in benzene and cyclohexane

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Abstract

Temperature dependences are found for the intramolecular and intermolecular contributions to the spin-lattice relaxation of protons in benzene and cyclohexane by dilution in deuterated analogs. The intermolecular contribution in benzene is discussed on the basis of the model for the molecular distribution found from x-ray diffraction studies. The Hubbard correction to the intermolecular contribution is calculated on the basis of the experimental parameters corresponding to rotation and translation. The results imply discontinuous translational motion of molecules in both liquids. © 1973 Consultants Bureau, a division of Plenum Publishing Corporation.

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